

Intermontanus



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NEWS & ANNOUNCEMENTS

UDWR'S NEW AMPHIBIAN & REPTILE MANAGEMENT PLAN

The UDWR recently announced their new plan for the management of amphibians and reptiles. The plan is code named "Operation Disregard," and was implemented with the elimination of the State Herpetologist position. It is rumored that the UDWR's position in regards to the management of the spotted frog, *Rana pretiosa*, and the desert tortoise, *Gopherus agassizii*, as well as a number of other herp species was a major factor in the decision to eliminate the herpetologist position. Apparently Dave Ross has been able to open a few eyes which were, politically, better left shut. So all in all the UDWR has decided to let the Wasatch populations of the spotted frog go extinct, and to ignore the rest of the state's herpetofauna.

The official statement sent to us by Dave Ross is: "Due to recent deficits in the state budget, the position of Herpetologist is being eliminated. The Director of our Division informed me that the selection of this position for elimination was based on politics. I would imagine that this decision may affect future work plan efforts by the Native Wildlife Section. Thought you and the Utah Association of Herpetologists would want to know." Signed, Dave Ross

If the idea of eliminating the position of State Herpetologist and/or ignoring the fact that the state has herpetofauna in dire need of attention bothers you, write Tim Provan and Randy Radant at the Department of Natural Resources, 1596 W. North Temple, Salt Lake City, UT 84116. You might also drop a line to the Governor.

ABSTRACTS FROM TWO UDWR REPORTS AND A PAPER BY PETER HOVINGH

The Utah Division of Wildlife Resources recently published two herpetological reports. The reports are available from the UDWR.

David A. Ross, Dennis L. Shirley, Patricia A. White, and Leo D. Lentsch. 1993. Distribution of the spotted frog along the Wasatch Front in Utah, 1991-1992. UDWR Report No. 93-4.

During 1991 (April-September) and 1992 (March-May) field surveys were conducted to assess spotted frog (*Rana pretiosa*) populations and habitat along the Wasatch Front in Utah. Nineteen sites with 126 adult spotted frogs and 162 egg masses were located in 3 counties in 1991. Fifty-four sites with 124 adult spotted frogs and 478 spotted frog egg masses were located in 5 counties in 1992. Five disjunct population clusters were identified. These clusters and their habitat, may have been subject to anthropogenic and natural impacts such as decreasing water levels (drought or water development), nonnative congeners, predaceous fish, or environmental contaminants. Mean number of adult frogs and egg masses per location in 1992 was 2.3 (SE=0.39) and 8.9 (SE=0.81), respectively. Number of frogs observed was not representative of relative abundance because the frogs displayed secretive behavior. Number of egg masses, therefore, was used as an indicator of relative abundance. Most frogs occupied locations fed by clear spring water, with shallow (<30 cm) water, emergent herbaceous vegetation, and organic or silt substrates. Occupied locations had a mean of 54% open water and were less than 0.4 ha in size. About 98% of the egg masses were in water less

than 20 cm in depth and about 80% of the egg masses were within 2 m of the shoreline. Recommendations for further study include expanded field surveys, population monitoring, and the development of a population estimator using an egg mass index.

Richard A. Fridell and Michael P. Coffeen. 1993. Desert Tortoise Population on the Woodbury-Hardy Monitoring Plot, Beaver Dam Slope, 1986. UDWR Report No. 93-6.

A study was initiated in 1986 to monitor the status of the desert tortoise (*Gopherus agassizii*) population on a 2.59 km² (1 mi²) study plot on the Beaver Dam Slope in southwestern Utah. The study plot was systematically surveyed for tortoises to determine population structure and population density using mark recapture techniques. Twenty-seven live tortoises and 50 tortoise remains were located on the study plot. The density of live subadult and adult tortoises was estimated at 8.6 to 16.3 per km² (22.3/mi² to 42.3/mi²). The majority of live tortoises located were adults (70.4%, N = 19) with adult males dominating the population (55.6%, N = 15). Carapace lengths were determined for 63 of 71 tortoise remains collected. Of these, 33 were subadult and adult tortoises (52%). The annual mortality rate of the adult tortoise population was estimated to be 13.8%. The population estimate is lower than previous estimates for the study site and suggests a significant decline in the tortoise population.

Peter Hovingh. 1993. Aquatic habitats, life history observations, and zoogeographic considerations of the spotted frog (*Rana pretiosa*) in Tule Valley, Utah. Great Basin Naturalist. 53(2):168-179.

Four populations of the spotted frog, *Rana pretiosa*, occur in western Bonneville Basin. Only the Tule Valley populations occupy aquatic habitats associated with warm (28°C) and slightly saline (1700-2700 µmhos/cm) springs. The spotted frog in Tule Valley breeds in cold-water portions of the peripheral wetlands, which exhibit maximum temperature variations (1-25°C), maximum conductivity up to 3200 µmhos/cm, and maximum pH values up to 9.7. Adult frogs are found in habitats with temperatures of 29°C, conductivity of 4700 µmhos/cm, and pH above 9.0 in the summer. The increased summer salinity and pH in frog habitats returns to lower values by the next breeding season due to underground recharge. Breeding in Tule Valley occurs earlier than in other Bonneville locations because of the warm-water sources. Spatial and temporal distribution of the spotted frog since the regression of Lake Bonneville 15,000 years ago and threats to present habitats are discussed.

HOGLE ZOO BREEDS CAPE MONITORS AND SPITTING COBRAS

Utah's Hogle Zoo recently reported the successful reproduction of the Cape or Bosc's monitor (*Varanus exanthematicus albicularis*). In December 1992, following 140-151 days of incubation, nine monitors hatched from the original thirty eggs laid. The eggs were artificially incubated on vermiculite with temperatures ranging from 28-29° C. This is believed to be the first time this species has bred outside its native country of South Africa.

Once again the zoo has bred its Spitting Cobras (*Naja naja sputatrix*). Seventeen cobras hatched between 21 & 23 June, 1993.

NEW PUBLICATIONS AVAILABLE

Herpetology of China: China, with 661 species of amphibians and reptiles in 164 genera and 34 families, possesses one of the largest and most diverse herpetofaunas of any country and it occupies a strategic geographic position as it bridges the Oriental and Palaearctic biogeographic zones. Despite the size and relative importance of China's herpetofauna, however, there is no existing work—in Chinese or in any other language—that comprehensively reviews all recognized species, until now.

The purpose of this new, 500-page book, written in English by Ermi Zhao (Chengdu Institute of Biology) and Kraig Adler (Cornell University), is to summarize the current taxonomic status and distribution of all Chinese species. The geographic coverage includes all of mainland China, plus Macao, Hong Kong, Hainan, and Taiwan.

The book contains 48 COLOR PLATES (371 individual photographs of animals and habitats), *including all genera and 330 species*. Due to the high cost of producing extensively color-illustrated works, this book will be issued in a relatively small edition, a significant part of which is destined for scientists and libraries in China and East Asia.

Alligators in China, by A.-A. Faivel. A facsimile reprint of the original description of the Chinese alligator (*Alligator sinensis*), published privately in Shanghai in 1879. Includes classical history and legends, natural history, technical description, and literature review. 42 pages, 3 plates. 6x9-inch format (15x23cm).

Send Orders To: SSAR Publications Secretary, Robert D. Aldridge, Department of Biology, St. Louis University, St. Louis, Missouri 63103. Make checks payable to "SSAR"; receipt sent on request only. Orders may be charged to MasterCard or VISA (account number and expiration date required); a 6.1 % bank charge will be added. Price list of SSAR publications and membership application available on request.

ZHAO AND ADLER: HERPETOLOGY OF CHINA

• Price to SSAR members before 1 November 1993. \$50 • Price to Institutions and Non-members. \$60 (*Postage: Add \$2*)

FAUVEL: ALLIGATORS IN CHINA

• Single booklet. postpaid \$6

REQUEST FOR INFORMATION ABOUT AMPHIBIANS AND REPTILES OF ZION NATIONAL PARK

For the past few months I have been helping to determine the status of the amphibians and reptiles in Zion National Park. The Woodhouse toad (*Bufo woodhousii*) has long been considered a common resident of the park, yet I have not been able to verify its presence there. The only *Bufo* I have found is *B. microscaphus*. Now before you start to think Zion is crawling with Woodhouse toads, let me remind you how variable the southwestern (or Arizona) toad is.

The cranial, which are distinct in the Woodhouse toad, are either present or absent in the southwestern toad, as is the light dorsal stripe. In addition, while examining toads most people fail to look at

the shape of the parotoid gland and tarsal tubercles. If you examine these characters and listen to the call, the toads in Zion are all southwestern toads.

Furthermore, all the toads in the Zion collection and the photographs in Wauer's book about Zion's herpetofauna are *B. microscaphus*. The question is, can anyone verify *Bufo woodhousii* in Zion N.P.?

A couple of other interesting questions about Zion's herpetofauna have also arisen. In the 1920's and 30's gila monsters (*Heloderma suspectum*) were found just outside the park. Has anyone seen a gila monster in or near the park in the last twenty years or so? In recent years (i.e.; since 1990) zebra-tail lizards (*Callisaurus draconoides*) have been seen very near the park, but not actually in the park. Can anyone confirm this species as a park resident? The southwestern blackhead snake (*Tantilla hobartsmithi*), the longnose snake (*Rhinocheilus lecontei*), and the glossy snake (*Arizona elegans*) are species which should occur in the park but have never been reported. There are a couple of reports which seem to describe the blackhead snake (more about this in the next issue), but they have yet to be verified. Any information on these species would be helpful. In fact, I am sure Zion would love to know about any species seen in the park as long as you have some locality data; dates are nice also. You can send information to: Sheri Fedorchak, Resource Management, Zion National Park, Springdale UT 84767.

In addition to the status of the amphibians and reptiles of the park, I am taking slides for the park to use in talks. A few of the species are proving difficult to find, so I would like to ask for your help. If you happen to find any of the following species please catch them and call me (I can photograph the snake at your house and I would be glad to release it at the site of capture for you). The species needed are: ringneck snake (*Diadophis punctatus*), southwestern blackhead snake (*Tantilla hobartsmithi*), and night snake (*Hypsiglena torquata*). All these species are noncontrolled and may be collected legally, provided they are not in a national or state park. They are also small delicate snakes which can overheat very easily and make terrible captives. You can reach me at 584-1292, during the day in Salt Lake, or 752-0297, evenings in Logan. Thanks for the help, Breck Bartholomew.

FEATURES

ANOTHER DRAFT OF THE UDWR SPECIES OF SPECIAL CONCERN

Dave Ross sent us the latest Draft of the Species of Special Concern. He has asked us to comment on the accuracy of the information. Of particular interest are the reasons for considering these species a special concern for monitoring and management. You can send your comments to Dave Ross, Utah Division of Wildlife Resources, 1596 West North Temple, Salt Lake City, UT 84116-3195.

Please be constructive in your comments to insure we are given the opportunity to offer our input for future UDWR issues.

Amphibians

Extinct Species

Relict leopard frog, *Rana onca*. This species once occurred in several springs along the Virgin River in Washington County. These sites were drained in the 1973 and subsequent surveys have not revealed any populations.

Endangered Species

Lowland leopard frog, *Rana yavapaiensis*. This species, first described in 1984, has recently been collected from the Virgin River downstream from St. George, Utah. The Utah population is disjunct from other populations in central Arizona and alterations to aquatic systems in Washington County make the continued existence of this species in Utah tenuous. This frog is declining throughout its range.

Utah Association of Herpetologists

Intermontanus

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This species is Federal category 3A, Proposed as extinct (Federal Register 56[225]:58814). Recent studies indicate that this species may be the same as the relict leopard frog (R. Jennings, Univ. Nevada, pers. comm.).

Threatened Species

Southwestern toad, *Bufo microscaphus*. This species exists in isolated populations within its range and, unlike other bufonid toads, it breeds in flowing streams. It hybridizes with *B. woodhousii* where flowing streams enter reservoirs along the Virgin River in Washington County. Populations of this species are declining throughout much of its range. This species is Federal category 2, Proposed for Threatened or Endangered status (Federal Register 56[225]:58813).

Spotted frog, *Rana pretiosa*. This species may consist of two separate species. Relict populations occur in the West Desert region of Utah and disjunct sites along the Wasatch Front. Habitat loss has contributed to declines in distribution and abundance. These populations may have declined and become isolated to the point where their genetic viability is threatened. This species is Federal category 2, proposed for Threatened or Endangered status (Federal Register 56 [225]:58814), but the listing has been postponed due to higher priorities (Federal Register 58 [87]:27260).

Sensitive: S1: Due to declining populations

Western toad, *Bufo boreas*. Populations of this large toad have disappeared from much of the southern Rocky Mountains. The USFWS has proposed that this species be listed as Threatened (Federal Category 2) in those areas (Federal Register 56[225]:58813). Only two sites along the Wasatch Front are known to have reproducing western toad populations in recent years.

Northern leopard frog, *Rana pipiens*. One of the most widespread species in North America and formerly ubiquitous throughout Utah, this species has declined in distribution and abundance. Commonly observed prior to 1970, it is uncommonly seen in many historic locations. Loss of habitat is speculated as the primary reason for observed population loss.

S2: Due to limited distribution

Pacific chorus frog, *Pseudacris regilla*. A few specimens were collected during the 1920's from southwestern Washington County and there are unverified reports from the Raft River Mountains in Box Elder county. No recent records of this species exist.

Reptiles

Threatened Species

Gila monster, *Heloderma suspectum*. In Utah this reptile is found only in southern Washington County. Populations of this venomous lizard are threatened in Utah due to illegal collection and habitat loss in southern Washington County. Habitat losses have occurred as a result of population growth and number of Gila monster historically observed has noticeably decreased.

Desert tortoise, *Gopherus agassizii*. Populations of this Mojave Desert turtle occur in declining numbers on the Beaver Dam Slope and other areas near St. George. Habitat loss, livestock grazing and a respiratory disease negatively affect tortoise populations. Populations have declined as much as 75% on Utah's Beaver Dam Slope. Listed in 1980 as Threatened by the U.S. Fish and Wildlife Service (Federal Register 45:55654)

Sensitive Species: S1: Declining Populations

Chuckwalla, *Sauromalus obesus*. Two populations of this species occur in Utah. One subspecies, the western chuckwalla, exists in Washington and western Kane Counties (*S. o. obesus*) and another subspecies, the Glen Canyon chuckwalla only exists in the Glen Canyon area of Page, Arizona north to the Henry Mountains in Garfield County (*S. o. multiforaminatus*). This large lizard is rarely seen by herpetologists and declines have been noted in portions of its range.

S2: Limited Distribution

Desert night lizard, *Xantusia vigilis*. Two disjunct subspecies occur in Utah. One population in Mojave Desert habitat south of St.

George and the other in a small, isolated pocket in Garfield County. The Mojave Desert population is associated with yucca and Joshua tree plants. Recent genetic studies indicate that these subspecies may be two species instead of one.

Glossy snake, *Arizona elegans*. This nocturnal species occurs as two subspecies in extreme southwestern (*A. e. eburnata*) and southeastern Utah (*A. e. philipi*). Few records exist from Utah of this secretive burrowing species.

Great Plains rat snake, *Elaphe guttata*. This subspecies (*E. g. emoryi*) of the corn snake is rarely reported in Utah and is limited to east-central Utah and west-central Colorado.

Utah mountain kingsnake, *Lampropeltis pyromelana*. This tricolored, secretive snake occurs in disjunct populations in the mountainous areas. Habitat ranges from pinyon-juniper to coniferous forests. Because of its striking coloration, it is a highly desirable species for reptile breeders and hobbyists.

Utah Milk snake, *Lampropeltis triangulum*. This species is spottily distributed in mountain and valley regions in sagebrush and meadow habitats. The subspecies (*L. t. taylori*) occurs only in Utah, northeastern Arizona, northwestern New Mexico and west-central Colorado. This species is sought after by those involved in the pet trade.

Western banded gecko, *Coleonyx variegatus*. This species is limited in distribution to the Mojave Desert habitat in southwestern Washington County.

Desert iguana, *Dipsosaurus dorsalis*. This species is limited to a few square miles area of the Beaver Dam Slope where creosote bush occurs in southwestern Washington County.

Zebra-tailed lizard, *Callisaurus draconoides*. Limited in distribution to desert washes and open plains of the Beaver Dam Slope in southwestern Washington County.

Lyre snake, *Trimorphodon lambda*. Restricted in distribution to the Mojave Desert in southwestern Utah. Few records of this species exist from Utah.

Western blind snake, *Leptotyphlops humilis*. This burrowing species occurs in rocky areas with sandy soil where the sub-soil is moist. In Utah, this snake is restricted to the Mojave Desert community in southwestern Utah. Few records of this species exist from Utah.

Western patchnose snake, *Salvadora hexalepis*. Restricted in distribution to the southern portion of Kane and Washington Counties.

Speckled rattlesnake, *Crotalus mitchellii*. Restricted in Utah to the Beaver Dam Slope of southwestern Washington County.

Mojave rattlesnake, *Crotalus scutulatus*. A desert grassland species restricted, in Utah, to the Mojave Desert association on the Beaver Dam Slope in southwestern Washington County.

Sidewinder, *Crotalus cerastes*. Restricted to the Mojave Desert association, from the St. George area in Washington County, Utah south to the Arizona border. Mostly observed in sandy areas.



Now we can
print
photographs.
If you have
any
interesting
pictures that
would look
good in black
& white, send
them in.

The following two articles are reprinted from other regional herp society newsletters. I don't know if any of you have noticed areas which have been thrashed by herpers (or someone who likes to look under every rock, log, and piece of trash), but I have seen a couple. I highly doubt that any UtAH members are responsible for this destruction, but I'd bet some of us know some of the people who are responsible. It's just too bad they don't get caught more often.

A CASE OF SIMPLE DESTRUCTION

By Jerry J. Feldner, Tempe, Arizona [reprinted from the *Sonoran Herpetologist*, 5(12), 1992.]

Twice this past spring, I had the opportunity to visit Arizona. In April, my son, Martin, and I had been in Baja California taking pictures of the beautiful spring growth after heavy winter rains. From Baja we went to Tucson so that I could attend a job fair. Old habits are hard to break so we left Tucson via the Ajo Road, Highways 86 and 85 on the way back to California. There is a place in the Crater Range just easily accessible from the road. I have been watching this habitat for many years and stopped in April to just look around. Since we were not on a collecting trip, we had not purchased hunting licenses and just wanted to observe the denizens of this rocky area.

In an area of dehiscing granite such as this part of the Crater Range, it is not unusual to find large rocks fallen down hillsides from outcrops. In April, we looked around the area and saw a seemingly healthy lizard population consisting of Chuckwallas (*Sauromalus obesus tumidus*), Whiptails (*Cnemidophorus spp.*), Side-blotched Lizards (*Uta stansburiana*), and other common lizards as well as birds of several species. Although there were fallen rocks, it seemed natural to me based on my experience in the area. We climbed around the rocks, peering into the many cracks and actually spotted several Chucks in cracks. *Uta* were all over the place; in the rocks, in the sparse brush around the base of the rock outcrops and in sandy areas between the steep rocky outcrops. Whiptails abounded in the flats and spiny lizards were in the wash areas.

Scarcely a month later, while returning from a trip to Tucson with Dr. Richard Montanucci of Clemson University and Jimmy McGuire, a graduate student at San Diego State, Martin and I traveled through the same area. This time, armed with proper collecting permits, we stopped at the exact same area to collect a pair of Arizona Chuckwallas for Dr. Montanucci to take back to his lab at Clemson. You cannot imagine my horror at seeing what had happened in the intervening month's time. Every rock that could be pried had been and there were both large rocks and flakes strewn at the base of the outcrops. The destroyer's must have used large pinch bars or wrecking bars to loosen and remove the rocks, some of which must weigh several tons. The marks on the remaining rock faces clearly show the marks of the tools used to clear the outcrops of loose or partially loose rock.

Worse, there were no lizards to be seen. A place where chucks were common a scant month before was devoid of animals. We all agreed that the people who destroyed the area were most probably looking for Mexican Rosy Boas (*Lichanura trivirgata trivirgata*), and probably took any Chucks and other reptiles as a bonus. In any case, the destruction of this bit of habitat, most of which occurred inside the fence of the Goldwater Bombing Range, is so complete that it will be many years before suitable living quarters again exist for either Boas or Chucks. We left the area benumbed by what we had witnessed. We were able to find a pair of Chucks for Dr. Montanucci further up the road and right on the roadside.

The Crater Range is notable for its graffiti, especially in areas accessible to the highway. While unsightly and certainly illegal, the graffiti does not appear to adversely affect the habitat permanently. I suspect that this assault on the habitat may be due to the recent

change in California law which allows the sale of 'captive-bred' snakes of the genera *Lichanura*, *Pituophis* and *Lampropeltis*. However, that is strictly conjecture on my part. Suffice it to say, a small but valuable part of desert-island habitat has been ruined for a long, long time.

RAPE OF HABITAT

By Carl F. Kauffeld. Reprinted from HERP, Bulletin of The New York Herpetological Society, Volume 18, No. 1. Dedicated as a memorial issue to Carl F. Kauffeld.

There are some of us, old fogies to be sure, who can remember what it was to go afield and enjoy the illusion that we were the first ever to set foot there. Even in areas near large cities it was possible to find undisturbed spots where one could get away from the feeling of being overwhelmed by the proximity of other people. But today, even where the population explosion and its concomitant land "development" have not taken their toll of natural areas, we are constantly reminded of the presence of other human beings by the vandalism of our fellow naturalists — of all people! From New York to Florida, from the Carolinas to California, from Michigan to Arizona, the immature naturalist (both young and old, professional and amateur) leaves a trail of destruction. I am very much afraid that the worst offender is the amateur herpetologist. It is true that a certain amount of rock turning, log rolling, and stump hacking is necessary if we are to see the elusive and often secretive subjects that we seek, but is it necessary to leave areas, as I have seen them looking as if an army with tractors and bulldozers had been through? Is this the price we are paying for popularizing herpetology? It is a sad blow to those of us who felt that we were **sharing** with generations yet unborn, the joys of a natural history pursuit. If all we have accomplished is the rape of habitats and the extirpation of whole populations, then it would have been better had we remained silent and hoarded our knowledge selfishly. Habitat vandalism is almost always accompanied by wholesale collecting of everything present. Who hasn't heard boasts of **finding and taking** a dozen Ring-necked Snakes from under one stone, or collecting 30 Black Racers from one hillside, or a hundred Spotted Salamanders from one breeding pool? And what became of these specimens afterward? Perhaps 98% died miserably and never accomplished any purpose whatsoever except to inflate some childish status seeker's ego. In these pages recently a splendid letter from Daniel E. Willard describes one such expedition, saying, "Some of the specimens died on the homeward journey; many died because the keeper couldn't feed them; several were never removed from the sack." This, despite the fact that, as he writes further, "It was an excellent opportunity to observe the animals in the field; good field data are needed for many species. Field surveys of a new area can be done by capture and release. Somehow an extensive collection only seems to tell you what there was in the area before you started." It is our contention here at Staten Island Zoo that the confirmed snake hater is much more merciful and less destructive to the herpetofauna than is the misguided, juvenile, over zealous collector. Whereas the former merely kills quickly the snake that he happens upon, the collector seeks out quantity and then lets the animals die a lingering death because he cannot care for them or dispose of them judiciously. What satisfaction is there for a mature person in acquiring such unwieldy numbers? Why not just take delight in seeing so many at large and **leave them where they are!** Certainly, like charity, conservation begins at home, and the young enthusiasts must develop a more mature attitude and control their juvenile impulses to grab everything in sight. Even in such a limited field as herpetology there is crowding. We must develop an ethic which will emphasize the right of everyone to enjoy creatures in their natural state — not a policy of "first come, first served," or "we'll never be back here again

so let's take what we can and let's not bother to replace a stone or turn a log back." Many young naturalists have precociously developed responsibility, and I have the pleasure of knowing several youngsters who take this responsibility very seriously. Habitat vandalism and wholesale collecting is not restricted to the young, but the wholesome patterns must be established by them. There are so many more of them, and they have so much more at stake that, with wild areas shrinking and their own numbers increasing, the need for self discipline becomes more and more imperative. In this era when consideration for the other guy seems to be becoming of less importance, self discipline will have to be practiced by those of us whose joy in living is wrapped so closely in natural history pursuits. Let us, therefore, begin by restraining those childish grabbing impulses. Leave something for the other fellow to see — and to take — if he has good reason and facilities for its care. Above all, **Leave the area as you would like to find it.** Aside from this aesthetic reason, self interest dictates that a habitat will continue as habitat for the creatures we love. Let no man say that you were here before him!

CAPTIVE CARE

CAPTIVE BREEDING OF BULL SNAKES

On 5-30-87, I purchased a juvenile male Bull Snake (*Pituophis melanoleucus sayi*), which measured about 1 1/2 ft., and was born the previous fall in Texas. It currently measures about 5 ft. On April 27, 1991, I purchased a female Texas Bull Snake (*P. m. sayi*), which measured about 6 1/2 ft., and is currently nearly 7 ft. in length.

On at least two occasions, during the month of May 1992, I observed the two Texas Bull Snakes in the process of mating. A friend of mine, Dave Jensen, also a member of UtAH, borrowed the large female for a snake program. On 6-27-92, he called me and stated that the snake had laid a clutch of 15 eggs. He placed them in a large plastic rectangular container with a plastic lid. Dave placed a layer of vermiculite on the bottom of the container and then a layer of moss. The eggs were placed on top of the moss. The vermiculite and moss were moistened with water. Moist paper towels were set on top of the eggs. The lid was placed loosely on top. When the container with the eggs was brought to me, I kept the eggs at normal room temperatures of about 72 °F. I checked daily to make sure that the paper towels and vermiculite were moist so that the eggs would not dry out. I added water whenever needed. The eggs were slightly larger than the largest chicken eggs which may be purchased in a store.

On September 24, 1992, several of the eggs hatched. The last of the eggs hatched on 9-27-93. The hatchlings measured about 1 1/2 ft. in length. Out of the 15 eggs which were laid, a total of 13 hatched, and all were healthy. On 9-24-93, Dave Jensen brought his camera with a telescopic lens and took many beautiful photos of the snakes in various stages of hatching, as well as of some of the ones already hatched.

On May 1, 1993, May 23, 1993, and May 26, 1993, I have observed the Bull Snakes in the mating process. I have the plastic container prepared for another possible batch of eggs. Concerning conditions for breeding, I keep the Bull Snakes in a wood cage with a glass front. The cage measures 4 ft. long x 2 ft. wide x 2 ft. high. The temperature is maintained between 80 - 85 °F by two incandescent light bulbs mounted in the top of the cage. The lights are left off for three months during the winter since the snakes appear to have a biological time clock and have no desire to feed during that time, even when they have been kept warm.

Submitted by: John Atamanczyk, 4896 South Farah Dr., Kearns UT 84118

HERPETOLOGICAL NOTES

ONE OF THOSE DAYS

During a spring excursion on the Mojave desert my wife & I were witnesses to the reality of life in this harsh environment.

One morning we captured a male *Callisaurus draconoides rhodostictus* (Mojave desert zebra-tail lizard). We moved him quite a distance from his home range for a photography session.

He was being very cooperative with us as we worked to set up our shots. Then all at once he decided that he'd had enough and took off. As we watched him running away, another lizard ran out to join him in what I thought was a territorial dispute such as I had witnessed before between a pair of *Uta*'s. Then I realized that the second lizard was easily double the size of the *Callisaurus*.

The second lizard picked up the *Callisaurus* in its jaws, got up on its hind legs and ran off. When I cautiously approached, so as not to scare it off, I realized that we had a *Gambelia wislizenii wislizenii*, the Long-nose Leopard lizard.



After quickly but carefully taking pictures of the two lizards, I caught the pair. Feeling guilty that my meddling with the zebra-tail brought him into danger, I carefully released him from his captor and after about 1/2 an hour of recuperation in the shade he was looking in fine shape.

On the trip back to where he was caught, we came across a *Crotalus cerastes cerastes*, (Mojave Desert sidewinder). In the excitement I put the lizard down on the ground to photograph the Sidewinder. After a few minutes the Sidewinder crawled over the lizard. By now I'm sure the lizard was thinking "Why me?" and he took off. Fortunately for me he was right in the area where he had been captured so I let him be, and continued to photograph the Sidewinder.

Submitted by Hal Whitlock, 1526 Ramona Ave, Salt Lake City UT 84105

CLASSIFIED ADS

BOA SURVEY: Please write for my questionnaire on Boa constrictor reproduction. Even if your animals have not reproduced, please respond if they are at least 4 years old and have had the opportunity. In return for a completed survey you will receive a chart showing the subspecies, their scale counts and range. William Joy, P.O. Box 821433, Dallas, TX 75382-1433, USA

Available for Breeding Loan: I have a large male Florida kingsnake, *Lampropeltis getula floridana*, available for breeding loan. If you are interested in borrowing him, contact Breck at 801-584-1292 (days) or 801-752-0297 (evenings).

UtAH MEETING:

August 10th at Hogle Zoo's auditorium (behind the old elephant house). **Louis Porras** will talk about **Costa Rican Herpetofauna** at 8:00 pm. Louis is one of the best Herp photographers in the country, so the slide show should be great. Louis promises to show slides of undescribed species too!

Feel free to show up after 7:00 for a pre-talk social. Be sure to mention you're with UtAH at the gate. See you there.



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